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ABSTRACT

Rumson-Fair Haven Regional High School's Senior Elective Program offers students who complete graduation requirements in the first three years of the four-year school a combination of the following options for the senior year: minicourse electives, independent study, work experience in the community, and preceptorials. The program, conducted in an open space building with an open campus policy, was evaluated in order to assess its effect on the cognitive and affective behavior of students. The social studies area was focused on since it was considered the most innovative aspect of the program. The evaluation process used objective tests, observations, interviews, and examinations of school materials and included two other schools for comparison. Results indicated that compared to students in other programs, seniors in the Rumson-Fair Haven program regarded their situation as more open, flexible, and responsive and displayed greater critical thinking ability and tolerance of ambiguity. On the other hand, these students were not most satisfied with their educational experience, did not show greater mastery of concepts and skills, and did not lead on a measure of self-assessed growth. The evaluators recommended continuing and strengthening the program. (Author/PGD)

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EVALUATIVE STUDY OF THE RUMSON-FAIR HAVEN REGIONAL HIGH SCHOOL SENIOR YEAR ALTERNATIVE PROGRAM

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I. INTRODUCTION

A. Purpose of the Study:

This evaluative study attempted to assess the effect of an alternative (non-conventional) secondary school senior year program on the cognitive and affective behavior of the students totally participating in that program. The implications of the observed results for the future educational programming of that program were also examined.

B. Rationale:

A major goal of social education * in a pluralistic, democratic society is the encouragement of intellectual processes that the members of that society will find useful in identifying, responding to, and hopefully solving the enduring and persistent problems that confront that society.

Effective thinking (critical/reflective thinking) is seen as a major component of the intellectual processes that social education attempts to encourage and develop. Effective thinking implies an ability to distinguish fact from opinion, make inferences, render judgments, and form conclusions (Fenton, 1967). The same cluster of intellectual skills are seen as useful in entering problematic societal areas traditionally "closed" to social education at the secondary level (Hunt and Metcalf, 1968). Effective thinking, as described above, is also seen as necessary, or at least useful, in the study of cultures that are markedly different from one's own, such as the Far East (Michaelis and McKeown, 1969). Brubaker (1967) and Jones (1971) see critical thinking as an essential tool in responding to the challenges of poverty, social injustice, and exploitation. Martorella (1971) finds logical analysis a component of effective thinking, useful in learning concepts. Metcalf (1971) implies that critical thinking lies at the core of value analysis.

While one views the tendency to give credence to the value of effective or critical thinking in social education, one is similarly confronted with the fact that secondary school social education is overwhelmingly historical in approach.

Because history frequently involves considerable amounts of time spent in the acquisition of factual information, there is a strong tendency to neglect processing such information. The results suggest that effective thinking is not developed. Bolster (1962) has reached this conclusion, as did Silberman (1970).

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* For purposes of content orientation of the evaluation, social studies was selected since it is considered the most "innovative" aspect of the alternative program being evaluated.

Fundamental assumptions concerning the value of history as the dominating discipline in the education of citizens in American society have been questioned by Metcalf (1963) Shermis (1967) and Schlesinger (1967). The task confronting social educators becomes that of discovering and developing alternatives that are demonstrably superior to the conventional social education one obtains in most secondary schools.

Rumson-Fair Haven Regional High School in Rumson, New Jersey appears to have taken a bold step in the search for alternatives in secondary education; and a major component of their innovation concerns the social studies. Concentrating specifically on the senior year, Rumson educators have devised an overall program which departs considerably from the conventional, history-oriented, lecture/recitation courses one normally finds in public secondary schools in this state.

Relying on modular scheduling, Rumson has inaugurated a comprehensive program of mini-courses, precepts, and independent study. Mini-courses appear to have sufficient flexibility to allow teachers to respond to the twists and turns of current events. Independent study appears to be sufficiently open-ended so that the ultimate value of the independent study outcomes is suspended until the student is well into his project or activity. In this regard, one is struck by the apparent superficiality of some independent study -- sky diving, yacht racing -- on the one hand, and apparent seriousness of purpose -- data retrieval, community teaching -- on the other. The assessment of independent study turns, in part, on the assumption that one form of learning is just as valid as another, and the learner benefits when provided the freedom to explore and fail, even (Holt, 1967).

Rumson-Fair Haven Regional High School is evidentally experimental and innovative. Accordingly, it can yield data which might be useful in the construction of innovative models for use in other systems contemplating innovation. The immediate problem becomes that of assessing the outcomes of innovation so that useful factors can be identified. For experimental purposes, the comparison of Rumson-Fair Haven with equivalent schools following a demonstrably conventional or non-innovative program was seen as yielding useful data. The immediate research effort thus becomes that of data acquisition and analysis.

C. Pertinent Definitions:

1. Alternative Program: Any secondary school program not based on lecture, fact gathering, and recitation as the dominent mode of instruction. An alternative program will include, but not necessarily be limited to, independent study, mini-courses, community projects, and student participation in curriculum decisions.

Note: The component of the alternative program at the Rumson-Fair Haven Regional that is most characterized by the option for alternatives is, in fact, the social education program. The social education outcomes, therefore, will be considered as "symptomatic" of alternative education effects.

2. Conventional Program: Any secondary school program not characterized by independent study, mini-courses, and community projects as recognized alternatives. The conventional program will be characterized by the predominance of "traditional" U.S. History and Civics courses as constituting the dominant thrust of the social education program.

3. Other terms may be defined as the study evolves.

D. Assumptions

1. Bivariate Normal population.

2. Behavior can be measured by subjective and objective written instruments. (A written response is thus an extenstion of verbal behavior.)

3. A linear relationship will exist between a response checked on a written instrument and a subject's a actual cognitive and affective behavior.

4. The "climate" of a school can be assessed through onsite observation, and through informal interviews with faculty, staff, and students.

E. Hypotheses to be Tested:

The evaluation was based on the supposition that the Rumson-Fair Haven Regional High School alternative senior program was in fact different from other, more conventional programs. Thus, the proposition was offered for testing that students in the alternative program would perceive their program as being more open, flexible, and responsive than were the other programs perceived and that these presumed differences would be supported by observation (H 1).

It was also hypothesized that Rumson-Fair Haven Regional senior high school students participating totally in the alternative senior year program would significantly exceed students participating in conventional programs in their:

H2: ability to think critically (i.e., make inferences, recognize assumptions, make deductions, evaluate arguments, and organize, analyze, and interpret information);

H3: knowledge and use of social studies concepts;

H4: tolerance of ambiguity;

H5: tendency toward self-study, time management, and independently initiated learning;

H6: satisfaction with and interest in their current educational experience.

Evolution of the above hypotheses will be accomplished by means of (1) objective tests, (2) observations, (3) interviews, and (4) examination of school materials.

II. METHODOLOGY

A. Sampling and Design:

In order to test the difference which may be generated by the tests, instruments, and miscellaneous measures described above, a one-way analysis of co-variance was applied to scores generated by the Rumson-Fair Haven Regional students and students from two equivalent schools. Equivalency was determined on the basis of comparable real estate valuation, per pupil education expenditures, mean CEEB scores, and the occupation and education of the subjects' fathers. (School B and School C - both of which met equivalency criteria - participated in the research as comparison schools. Additional criteria such as mention in National Merit Achievement Awards, final choice of college upon graduation, overall percentage of students who choose to continue education, etc. were also considered.

In this study, the students totally participating in the alternative program at Rumson-Fair Haven Regional High School were considered as the "treatment" group. Students completing conventional programs at School B and School C were considered as the "comparison" groups.

Three comparisons were attempted in the course of this study: Between Rumson-Fair Haven Regional seniors participating totally in the Rumson alternative program and: (1) seniors participating in conventional programs in School B and School C ; (2) Rumson-Fair Haven Regional seniors who have chosen not to participate in all the features of the alternative program,* (3) Rumson-Fair Haven juniors -- none of whom have participated in the Rumson alternative program.

* Note that some features of the experimentalprogram (e.g. scheduling) are experienced by all Rumson-Fair Haven seniors.

B. Instrumentation:

The evaluators employed a General Survey for the social education program at each high school. Teachers and students were asked to participate in this survey. Using guidlines established by the NCSS Task Force (Social Education, December 1971) an attempt was made to assess the general strength of the programs. This provided some validating data useful in testing the basic supposition (H1) that the programs were different and were perceived by their students as such in terms of such things as openness, flexibility and responsiveness to students.

One of the evaluators also spent approximately 18 days observing at the Rumson-Fair Haven Regional High School. During this time approximately 100 seniors were interviewed informally, the average interview running between 15 and 20 minutes. The same evaluator spent 5 days observing at School C. Six visits were made to School B. Faculty, staff and students were interviewed briefly and informally at schools B and C. Classes were observed in social studies at School C. Additionally, the student newspaper at Rumson-Fair Haven Regional has been obtained for the 1972-73 school year. Additional (similar) materal has been received from School B and School C.

The Watson-Glaser Critical Thinking Appraisal and the Sequential Test of Educational Progress II: Social Studies (1969) were used to test H2 and H3 respectively.

The Watson-Glaser testsfive higher intellectual processes.

Process	Split-Half Reliability
Inference	.61
Recognition of Assumptions	.74
Deduction	.53
Interpretation of Information	.67
Evaluation of Arguments	.62

Validity data is available. The Watson-Glaser Test, for example, was administered to more than 5,000 freshmen in liberal arts colleges in 13 states, and to more than 500 women in Catholic colleges in 10 states. (Internal consistency for test items is put at .75).

Twoscales were used to test H4. The first test was Budner's Intolerance of Ambiguity Scale (1962). This scale correlates moderately with the F Scale (Christie, Havel, and Seidenberg, 1958) and also with conventionality, belief in the devine power, dogmatism, and favorable attitudes towards censorship (Robinson, Measures of Political Attitudes, 1970). Reliabilities computed by Cronbach's alpha formula (Guilford 1954) are put at .85. Validity studies involving interjudge agreement on ratings or respondents' intolerence of ambiguity support the validity of this scale.

The Martin and Westie Intolerance of Ambiguity Scale (1959) was also used. No reliability information is given. This intolerance of ambiguity scale, however, bears close resemblance to several items on the original F Scale, thus suggesting relevant face validity. Further, the scale significantly distinguished between the tolerant and prejudiced Pseudo-science, Threat-competition, and "F".

In addition to personal interviews, discussions with faculty members, an examination of student publications, and an assessment of independent study projects, a Self-Assessed Growth Survey was used to generate measures of behavioral tendency (see appendix). This is an experimental instrument which appeared to have some face validity. Attempts to ascertain measures of reliability and internal consistency are in progress. The sum of these measures was considered sufficient to test H5.

Interviews, on site observations, and faculty judgment were used to test H5. The Community Survey Questionnaire (see appendix) was considered as a written interview.

Two indices of school sentiment were used to test H7. Imagine That (see index) has an internal consistency index of .58 and a test-retest stability index of .49.

The names appearing above all instruments have been selected so not to give students a clue to the specific trait or skill being measured. This is an attempt to control for cognitive dissonance or resentment.

III. STATISTICAL RESULTS

A. Equivalence of Districts and Samples:

The three school districts that were compared appeared to be quite similar in many important respects. The New Jersey State Department of Education reports the data shown in Table 1 below:

TABLE 1

Comparison of the Three Districts

	Rumson-Fair Haven	School B	School C
Enrollment Grade 12	324	368	155
Cost Per Pupil	$1,415.27	$1,435.54	$1,237.60

All three communities are suburban, all three spend a considerable amount on education, and all three are relatively small to medium with School C having about half the enrollment at grade 12 of the other two schools.

The comparison of the four samples * in Table 2 shows that although the schools are not identical, they are clearly all at the upper end of both the intelligence and socio-economic scales. While it is probably impossible to find three school districts whose clientele are identical, the statistical data suggest that these districts are similar. To the extent that the populations of three school districts are different, the comparison districts, B & C are slightly higher on both intelligence and SES necessitating a statistical adjustment.

The Rumson-Fair Haven sample is treated as two samples as is described in the next section.

TABLE II

Means and F - Ratios for the Four Programs on the Control Variables

	Rumson-F.H. Expts.	Rumson-F.H. Com.	School B	School C	F - Ratio
I.Q.	115.3	114.8	123.6	121.9	10.12 **
College Boards	1037	1025	1149	1103	
SES **	16.1	16.2	15.1	14.2	5.93 **

* $P < .01$

** The lower the numerical score, the higher the SES; 13 is the "highest" score possible.

B. Statistical Procedures:

The seven hypotheses concerning the relative effectiveness of the Rumson-Fair Haven experiment program were tested by means of analysis of covariance procedures. One-way analyses of variance with adjustment for three covariates was accomplished using the computer program BMD X64. Four levels of the independent variable were compared: (1) Rumson-Fair Haven Regional experimentals (defined as senior year students simultaneously enrolled in mini-courses and independent study), (2) Rumson-Fair Haven Regional comparisons senior year students taking one or neither of the experiment options), (3) senior year students in School B, and (4) senior year students in School C. * Because of initial differences between students in the four programs (see Table 2) covariation procedures were included in the analyses. These procedures automatically adjust the means and F - Ratios in all analyses so that the groups could be assessed on the outcome measures independently of these confounding differences. IQ test score, college board score, and socio-economic status (as measured by the Hollingshead Index) served as covariates or control variables. All means and F-Ratios shown in the presentation of results have been adjusted to eliminate the effects of these three sources of confounding. On this basis, the design can be considered to be a reasonable approximation to the nonequivalent control group design (Tuckman, 1972).

C. Results on Program Perception:

Hypothesis 1 dealt with the extent to which students perceived the different programs as being different in degree of openness, responsiveness, and flexibility as measured by the General Survey. Results of this comparison appear in Table 3. As can be seen students perceived the different programs as being highly different and significantly so ($F = 45.90$, $df = 3/259$, $p < .001$) with the Rumson-Fair Haven Regional experimental program being seen as highest on this measure. This supported the hypothesis.

D. Results on Critical Thinking:

Hypothesis 2 dealt with the degree of difference in critical thinking skills among students in the four programs as measured by the Watson-Glaser Test of Critical Thinking. Results (appearing in Table 3) show another significant difference across programs ($F = 9.03$, $df = 3/259$, $p < .01$) with the Rumson-Fair Haven Regional experimentals again registering the highest adjusted mean score on this measure. This finding supported H 2.

*The original design called for a comparison between Rumson-Fair Haven Regional juniors and seniors as a further indication of program effects. These comparisons were invalidated by two unanticipated methodological difficulties. First, juniors' performance on the standardized test instruments are scored on different norms than seniors' performance, thus making comparisons meaningless. Second, at the end of the school year when measurement took place, juniors were already identifying with the senior program which was reflected both in their attitudes and behavior. Thus, juniors could not be considered an unbiased control.

E. Results on Social Studies Skills and Concepts:

Hypothesis 3, dealing with the learning of social studies skills and concepts as a result of the different programs, as reported on in Table 3 in terms of scores on the STEP Test. On this measure no significant difference were obtained ($F = 0.69$ $df = 3/259$) indicating that the programs were producing the same amount of learning in the area of social studies skills and concepts. * On the strength of this finding, hypothesis 3 was rejected.

TABLE 3

Adjusted Means and F - Ratios For the Four Programs on the Dependent Variables

	Rumson-F.H. Expt.	Rumson-F.H. Com.	School B	School C	F - Ratio
H 1 General Survey	32.6	30.8	29.8	24.5	45.90 ***
H 2 Watson-Glaser	67.7	67.4	65.0	58.3	9.03 **
H 3 STEP	457.6	456.8	454.9	455.7	0.69
H 4 Tolerance of Ambiguity I	59.2	56.0	55.6	58.4	6.79 **
Tolerance of Ambiguity II	307.7	319.4	306.2	314.0	1.34
H 5 Imagine That	7.8	8.2	7.2	6.8	5.80 **
SS I	218.0	219.4	227.3	192.7	30.82 ***
H 6 Self-Assessed Growth	51.4	50.8	55.7	51.8	6.94 **
H 7 Community Participation	1.5	1.1	1.5	0.9	3.20 *

* $P < .05$, ** $P < .01$, *** $P < .001$

* Recall that social studies was chosen as a test area because of the high degree of "innovation" in this area in the experimental program.

F. Results on Tolerance of Ambiguity:

Hypothesis 4 dealt with tolerance of ambiguity, the degree to which students rejected extreme, closed positions in favor of remaining open-minded and seeking more information in an ambiguous situation. Two instruments were used: (1) Tolerance of Ambiguity I (a long-form) and (2) Tolerance of Ambiguity II (a short, 8 item, form). Results on both measures appear in Table 3. On the longer measure, differences between the four program groups attained statistical significance ($F = 6.79$, df = 3/259) at the .01 probability level. Students in the Rumson-Fair Haven Regional experimental program earned the highest mean of the four groups on this measure indicating they were most tolerant of ambiguity.

On the short-form measure (see Table 3) no significant differences were obtained ($F = 1.34$, df = 1.34, df = 3/259) between the groups. However, this second measure by virtue of its strength (or lack of it) was not as reliable as the first. Its greater error of measurement may have accounted for the failure to obtain significance. On the basis of the two measures, it was con-concluded that hypothesis 4 was supported.

G. Results on School Satisfaction:

Hypothesis 5 dealt with school satisfaction and was measured by (1) Imagine That (a measure primarily of attitudes toward the teaching process experienced) and (2) School Sentiment Index (SSI; a measure of general attitudes toward the whole school experience). Results on these measures are reported in Table 3.

On the Imagine That test the four groups differed significantly as indicated by an F - ratio of 5.80 which exceeds the .01 probability level for 3 and 259 degrees of freedom. The Rumson-Fair Haven Regional comparison students attained the highest mean score on this measure (8.2) with the Rumson-Fair Haven Regional experimentals a close second (7.8). The two comparison district schools were third and fourth respectively (7.2 and 6.8).

On the SSI significant program differences also occurred ($F = 30.82$, df = 3/259, $p < .001$. On this measure School B earned the highest mean (227.3) with Rumson-Fair Haven Regional experimentals intermediate (218.0).

A word of interpretation is in order on this hypothesis which must be rejected based on the findings but rejected with qualifications. School B offered a total school program which featured strong supportive features such as a resource center, school newspaper, drama program and others. These highly regarded features were most likely the basis for the high degree of school satisfaction registered on the SSI (with considerably less satisfaction registered on the teaching-oriented Imagine That). Since the Rumson-Fair Haven

Regional experimental program is largely oriented to instruction and curricular activities, it may not be fair to judge its appeal on a measure as global as the SSI. Looking exclusively at the findings on Imagine That, the higher scores for Rumson-Fair Haven Regional comparisons than experimentals suggests that instructional processes be examined closely for possible improvement in the experimental program.

H. Results on Self-Assessed Growth:

The results on Self-Assessed Growth (hypothesis 6; see Table 3) closely parallel those on the SSI. Significant findings ($F = 6.94$, $df = 3/259$, $p < .01$) are based primarily on the high mean for school B (55.7) with the Rumson-Fair Haven Regional experimentals again intermediate (51.4). On this basis hypothesis 6 was rejected. One can only surmise that the positive total program in School B is producing these positive assessments of personal growth. It must also be remembered that the instrument used to measure self-assessed growth was constructed for this study and is not standardized.

I. Results on Community Participation:

Hypothesis 7 dealt with a measure of Community Participation the results for which are presented in Table 3. The significant F - ratio obtained (3.20, $df = 3/259$, $p < .05$) reflects the high scores of the Rumson-Fair Haven Regional experimentals and School B students (1.5 each) as contrasted to the low scores of the other two groups (1.1 and 0.9). These findings lead to a qualified acceptance of hypothesis 7. Again, School B's performance on this measure is consistent with its global extra-curricular emphasis.

J. Results on School Attendance:

The comparison on school attendance figures includes only two groups: Rumson-Fair Haven Regional seniors and seniors from School C. Attendance data from School B was not available. Rumson-Fair Haven Regional seniors were considered as a single group for this comparison.

For the school year, the mean number of absences for 50 randomly selected seniors at Rumson-Fair Haven Regional High School was 14.14 as compared to 16.14 for 50 randomly selected seniors at School C. When compared statistically, the resulting t of .752296 at 98 degrees of freedom does not attain significance at the .05 level of probability. Thus, the programs can be considered to produce equal attendance even though the penalties at School C are considerably greater for unexcused absences and the grounds for being excused are quite restricted.

IV. OBSERVATIONAL RESULTS

Direct observation of day-to-day activities at Rumson-Fair Haven Regional High School and the two comparison high schools was an important adjunct of this study. Between March and June of 1973 evaluators spent a total of twelve days at Rumson, six days at Comparison School B and eight days at Comparison School C. During this period the staff interviewed students and teachers, observed classes in progress, toured various learning and activity centers, spoke briefly with representative administrators, and examined generally the physical plant. Evaluators were assisted at Schools B and C by two Rutgers undergraduates majoring in secondary school education. These relatively youthful observers conversed freely with students at both schools and reported impressions and findings to the staff.

RUMSON-FAIR HAVEN REGIONAL

The educational philosophy articulated by the Rumson administration is one of allowing students the freedom to develop self-discipline and responsibility for their own educational growth. This approach is seen as hopefully culminating in the development of an appreciation for one's natural heritage and a capacity to respond to the demands of a changing society. Operationally, this translates to a schedule based on a cluster of 20-minute modules, the lengths of which vary from one unit to as many as five per day, depending on the demands of each particular course. Approximatly 25% of each student's day is unscheduled, which subsequently permits the use of any one of several resource centers, a talking study area, libraries, laboratories, and shop facilities.

During the 1972-73 school year Rumson seniors were strongly encouraged to develop independent study projects during their unscheduled time, and approximately 76% of the class responded. By April of 1973, however, observers noted that only 41 of 117 students interviewed had actually begun work. An even smaller number of students said that they had given their project consistent effort throughout the school year. Although students worked more or less under interest advisors and enjoyed the ready assistance of preceptors, most still admitted varying degrees of difficulty in specifically focusing on the crux of their project. A number of students interviewed said that the independent study requirement had weighed on them from the beginning and that by spring the onus, had, indeed, become burdensome. Twelve of the 117 students interviewed mentioned that they anticipated waiting until the last possible minute and would then put something together quickly in order to satisfy grading requirements. A student poll conducted in February, however, disclosed that only 10% of the class (response to the questionnaire was put at 74% of the senior class) was actually unhappy with their independent study.

The dominant impression gained during student interviews was that most were trying, indeed, to bring their independent study to an academically respectable conclusion, but were uncertain as to the best or easiest way to go about it. Evaluators learned, for example, that few students were familiar enough with the basic steps of inquiry -- at least to the point where the procedure might be discussed readily. Several students were vaguely aware that inquiry normally involved orienting on a specific problem, hypothesis forming, and eventually the gathering and analysis of evidence for the purpose of drawing conclusions and

making generalizations. For many students independent study assumed the form of a solitary field trip and subsequent description of the experience. Many students, of course, were engaging in forms of independent study which did not lend itself to systematic intellectual processes. While students conceded that some independent study was obviously shallow and hardly worthy of much merit, they vehemently cautioned against the placing of prior value judgments and suggested that the freedom to fail might in itself be seen as a learning experience.

Both traditional and mini-courses were observed at Rumson. Without exception, teachers were well-prepared for class and most seemed to be genuinely interested in the subject matter. A loose form of lecture and recitation appeared to be the dominant instructional mode, although one teacher evidently used the inductive teaching method rather extensively. Level of student preparation appeared to be adequate, but student response wassomewhat subdued. The latter is possibly attributable to the presence of an observer. Although value issues were sometimes raised in class,an attempt to analyze values or resolve value conflicts was not observed.

Laboratories and industrial arts facilities seemed to enjoy a reasonable degree of use; the social studies resource center and language learning facilities appeared to be under-utilized. Few seniors were seen taking advantage of the extensive and apparently well-staffed library at Rumson. Student computer terminals also seemed to be under-utilized; but this may stem from equipment difficulties. Simpler, more efficient terminals were seen in use in other schools on a far more extensive scale.

Evaluators found Rumson seniors generally willing to discuss their personal ambitions and school situation in a frank and adult manner. Considerable enthusiasm for the senior year was most obvious, and the majority of those interviewed cited the free management of time as the program's strongest point. Most were extremely conscious of routine academic demands and seemed to be quite eager to demonstrate that they were equal to the intellectual responsibilities that increased freedom tends to imply. During interviews it was noted that students would continually check class schedules and then abruptly terminate the discussion when meeting time arrived.

The general cleanliness of the surroundings in the Rumson Senior Wing was noteworthy. Students generally cleaned their tables after snacking. Other students often cleaned up after the few who were careless. When evaluators asked who set the standards, most students could not answer. Apparently, in the absence of visible authority, students had internalized most of the ground rules and conventions necessary for the day-to-day functioning of their school.

In a similar light, students frequently mentioned their general respect for property rights that they learned at Rumson. Many noted the fact that lockers were not locked (without doors) and items such as sweaters and tennis racquets could be left there for long periods of time with every assurance of safety. The Rumson

seniors were apparently "behaving" themselves on their own and were apparently quite proud of the fact.

Several students still admitted skipping school for fairly transparent excuses; yet most expressed some guilt about this. Many students said that they often felt compelled to read ahead on days absent in order to cover material that might be assigned in class. A few noted that flexible scheduling permitted students to make up missing work with little or no difficulty.

Dating behavior was very much on the minds of many students, and the evaluators were surprised at the frankness with which students tended to bring the subject up. In most cases, female students initiated the conversation. Eighteen young women openly discussed the possibility of some form of an unstructured relationship with boy friends (who tended to be somewhat older and usually in college). Several students mentioned that (always) their classmates were currently practicing birth control, and that information was readily available through Planned Parenthood in Red Bank. The accuracy of this information, of course, could not be verified; yet it did indicate that Rumson women were at least thinking about a degree of release from traditional role constraints confronting American women. It was noted, for example, that women at Rumson tended to respond more positively toward indices of school sentiment than their male counterparts. Trends in the program, conceivably are noted earlier by female students.

Evaluators also noted that a sizeable proportion of the senior class at Rumson was engaged in part-time employment. Approximately 46% of the class worked, with the average student working six hours each week.

Part-time work was seen as contribution to over-all growth and maturation during the senior year. Again, flexible scheduling often made such employment possible. Economic gain arising from apart-time job and the concomitant management of personal finance was also seen as a growth accelerant.

COMPARISON SCHOOL B

Comparison School B was located in a high income, Essex County suburban community approximately 20 miles from New York City. The Administration of School B does not articulate what might be considered a "guiding philosophy." It does submit, however, that the school's primary responsibility is the development of the intellect, and that the individual student is the focal point of interest. Emphasis is placed on small groupings and one-to-one situations; students are encouraged to tutor one another. This general approach is seen as hopefully leading towards an education that is equal to each student's ability and relevant to his and the nation's needs. Six years ago School B initiated modular scheduling with 18 modules of 20 minutes duration each day. Independent study is possible under this arrangement; yet there is no concerted effort on the school's part to encourage this particular alternative. Several teachers interviewed, in fact, were not even familiar with the term. Other teacherswere fully aware of the concept of independent study, but admitted that its widespread use remained a future goal.

Comparison School B currently follows a single curriculum in which all students are required to take four years of English one year of World Cultures, and two years of American History. Over the past seven years 75% of School B's graduates have entered four-year colleges, 13% have entered junior colleges, 4% have entered technical schools and approximately 8% have chosen not to continue their education.

Students at School B expressed extreme satisfaction with their courses and general surroundings -- which were not particularly modern or fancy. Evaluators found the students actively inquisitive about the purpose of the testing and many of the participants were quite eager to know the final results, especially in relation to other schools taking part in the study. It was also noted that while students at other schools might be described as "taking" the tests, the students at School B could easily be described as "attacking" the test instruments. Students seemed to apply themselves with uncommon vigor and frequently demanded that evaluators clarifytest items. In one instance some tests were administered during an oppressive heatwave. No one complained. During the summer, 16 incomplete surveys were mailed to students at their home address -- 16 completed instruments were returned.

The general impression obtained at School B was that of intense activity. Learning facilities were being "used to death" as evidenced by the large number of students poring over maps and charts in the social studies resource centers. Computer terminals were fully in use every day and students were frequently seen waiting patiently for a chance to use the machines. The school newspaper was actively peddled about the school, and students were apparently responsible for finances. School B also operated a student-run wire broadcasting system, which delivered ear-shattering music to the student commons and other areas about the

school. Music was frequently interrupted for public service announcements and periodic news broadcasts. Students at School B were actively working to obtain facilities for a 10-watt radio station to be operated from the school.

Evaluators also noticed that newspaper and magazine reading was quite common, and copies of the New York Times were much in evidence. Students admitted, however, that a subscription was a prerequisite for several social studies courses. Creative arts and industrial arts workshops were in extensive use; evaluators did not have the opportunity to observe traditional science courses in progress.

Equally noticeable to evaluators was the general disregard of school surroundings at School B. Littering was common inside and outside the building. Hallways tended to be strewn in places with used paper cups, empty beverage cans, and discarded paper. Students seemed only vaguely aware of what was so patently obvious to outsiders. " I guess nobody gives a damm here," one senior remarked when asked about the condition of the grounds.

According to teachers interviewed at School B, absence and class cutting did not appear to be much of a problem. Several teachers felt that students automatically made adjustments for lost time. Strictures against truancy and class cutting were "still on the books" but both teachers and students said that the rules had not been invoked in recent times.

COMPARISON SCHOOL C

Comparison School C was located in a high income, Morris County suburban community approximately 30 miles from New York City. According to statistics furnished by the district, only 5% of the wage-earning parents work within the borough in which the school is situated; the remainder commute to New York City and to other locations in New Jersey. The borough is comprised of single family homes with very little industry. The population includes business executives, intellectuals, and many managerial level business leaders. Accordingly, frequent business transfers cause an average turnover of 10% in the population each year. The district finds that this does not cause any real problem, for the socio-economic background and educational desires of newcomers tend to match that of those who transfer out.

The guiding philosophy of School C is that of helping the student acquire the facts and skills necessary to understand and interpret issues and to make judgments consistent with his individuality. The classroom is seen to be a place to develop attitudes about critical issues in all areas ..."it is also the place to involve the student in performing, building, doing, making, so that the individual refines his emotional, as well as his intellectual, responses to life."

The students at Comparison School C are well-endowed intellectually, and approximately 85% elect to continue their education each year. Approximately 45% of the students at School C carry five traditional major subjects during the senior year; the remainder tend to carry four major subjects and one elective such as music or drama. All courses meet five times each week and each period is 45 minutes long.

Independent study is possible at School C. Before independent study is undertaken, however, the student must first read the description of the Independent Study Program for School C and then execute a "Preliminary Application," which is a two-part document of some length. The student must then arrange an interview with the Chairman of the department to which the desired independent study. The chairman then reviews the Independent Study program with the student (a prospective teacher/advisor may be present at this conference). The student then must prepare a typewritten, detailed statement of his independent study plan including: (1) objectives, (2) method of study, (3) resources, (4) method of evaluation, (5) plan for research project, thesis or culminating activity. Once this statement has been prepared, the student must arrange a second conference with School C's Independent Study Screening Committee. This will include necessarily the Principal, Department Chairman, Guidance Counselor, and Independent Study Advisor. The student may not proceed until he obtains approval from the Independent Study Screening Committee (which may need to weigh the matter), nor until he secures a letter of approval from his parents. All materials must accompany the letter to his parents.

It is also recommended that school time not be used for making preliminary independent study arrangements. During the 1972-1973 school year fewer than 12 students undertook independent study.

The Student behavior at School C is rigidly controlled by strict regulations which are clearly detailed in a student handbook. Students are expected to carry this book, and evaluators were impressed with the number of handbooks that were produced upon request. Students may not be absent from school to engage in research or prepare for examinations. All students "are expected to organize their time to complete their outside assignments punctually and still attend school regularly," the rulebook cautions. If a student is absent on the day a paper is due he may receive full credit only by: (1) sending the paper in with someone so that the paper is delivered to the teacher by first period or (2) by mailing the paper so that it is postmarked before 8:30 A.M. on the date due. Students failing to meet these requirements face a "penalty" of one grade lower for each day late.

Attendance figures are reasonably impressive at School C (although not as high as those of Rumson-Fair Haven Regional High School). This is understandable when one realizes that a "truant" is assigned one detention for each period missed. A day's absence can often result in a week of detentions. Students also receive "F" for all work due on days absent, and this work may not be made up. Students are also assigned detentions for tardiness. As one senior guidance teacher explained, "teachers here just love to assign detentions, even if a student is 15 seconds late. They just wait for the bell and then go after the kids with a vengeance." Students assigned detentions must remain after school for 2 hours and 45 minutes. The district has hired a full-time paraprofessional to monitor the detention hall. Seniors with jobs may work off their detentions during school hours i.e., during free periods,

Rules have recently been eased somewhat for the senior class at School C. If parental permission is granted, seniors are permitted free access to available school facilities during study halls and lunch period. Seniors also lose this perogative if an unsatisfactory grade is received in "application" in any subject during any marking period. Students also lose all privileges if they skip a class, use an automobile without permission, smoke in a car, loiter, or fail to call in when absent.

The exercise of First Amendment freedoms is somewhat discretionary at School C. For example, literature may only be distributed to students at two remote points on the school grounds, and then only after school hours. Dress codes have recently been eased; yet clothing prejudicial to the good order of the school is prohibited. One student was suspended, for example, after an altercation arising from his refusal to take off a purple coat at the request of an assistant principal.

Few classes in progress were observed at School C; most teachers tended to close their doors on the final bell (which was not really a bell but rather a high

frequency electronic signal quite similar to the sound that emanates from a modern police siren). In any case, lecture and recitation seemed to be the dominant mode of instruction. Several teachers were seen speaking from small, desk-top lecterns. Science teachers tended to have a preference for white laboratory coats. Many took their profession quite seriously. At a teachers' meeting held during the spring of 1973 a motion for limited implementation of pass-fail grading was soundly defeated.

The students at School C are evaluated on the basis of academic achievement and citizenship. Courtesy, punctuality, leadership responsibility and group participation contribute to one's citizenship grades. Students obtaining a grade point average of 3.5 (A = 4) are eligible for the honor roll, provided they are able to show evidence of "good citizenship." A C in any course, no matter what the overall grade point average might be, automatically disqualifies one from the honor role. An unsatisfactory "attitude" is also grounds for disqualification.

Students at School C openly complained to the evaluators about the lack of freedom; and many admitted breaking the rules whenever possible. Students were also quick to ridicule teachers and administrators before the evaluators, who were obviously outsiders. Several students at School C also chose to deface their test instruments, thereby rendering their results useless. Students at School C were also less inclined to discuss their personal plans and ambitions with the evaluators. Nothing, it seemed, really interested them.

School C was extremely clean, however. Evaluators also noted that it was unusually quiet as a high school. When school ended students left rapidly and within minutes the building was virtually empty and almost totally silent.

V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A. Summary of Purpose:

Rumson-Fair Haven Regional High School is running a Senior Year Alternative Program supported by Title III monies which is characterized by such innovative features as modular scheduling, mini-courses, independent study option, group precepts, flexibility of rules, and flexible use of space including a student lounge. This program was expected to (1) be seen by students as open, flexible, and responsive, (2) improve their learning and thinking skills, (3) make them more tolerant of ambiguity, (4) make school a more positive experience for them, (5) help them grow and mature in their own self-management, and (6) increase their willingness and inclination to participate in community activities.

B. Summary of Methodology for Evaluation:

For comparison purposes four groups * were identified: (1) Rumson-Fair Haven Regional seniors enrolled in both mini-courses and independent study, (2) Rumson-Fair Haven Regional seniors enrolled in one or none of the two options **, (3) seniors in School B, a school in an affluent New Jersey suburb, which has introduced some alternatives in its senior year program (e.g. modular scheduling) but not as many as Rumson-Fair Haven Regional, and (4) seniors in School C, also located in an affluent New Jersey suburb, but offering a senior year program that is highly traditional in both control and program.

Samples of from between 50 and 60 students were randomly drawn from each group and tested during the two weeks before graduation. Test measures were chosen or constructed to measure each of the purposes listed above and included two standardized learning measures, the STEP Test for social studies *** and the Watson-Glaser Test of Critical Thinking. Because of small but significant differences in intelligence and social status between the four groups, statistical adjustments were made in the analysis to provide compensation and hence render the districts equal on these important factors.

C. Summary of Findings:

The following statistical findings were obtained:

(1) Rumson-Fair Haven Regional seniors in the program saw their program as being more open flexible, and responsive than did seniors in the other three programs. In fact, they did see the program as offering them more options than the other programs offered.

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* Rumson-Fair Haven Regional juniors were originally included for comparison purposes but were subsequently dropped for methodoligical reasons.

** Keep in mind that this group experiences some of the alternatives in the experimental program even though it has not chosen the two selected for distinguishing betwwen groups.

*** Social studies was chosen as a sample target area because it was taken by all students and because it reflected the alternative program methodology.

(2) Rumson-Fair Haven Regional seniors in the program displayed more critical thinking ability than seniors in the other three programs upon completion of the program.

(3) No differences among seniors in the four programs were obtained on the mastery of social studies concepts and skills. All presumably gained equally in this area.

(4) Rumson-Fair Haven Regional seniors participating in the alternative program displayed greater tolerance of ambiguity than seniors in the other three programs upon completion of their program, again reflecting program impact in an important goal area.

(5) Rumson-Fair Haven Regional seniors in the alternative program were not clearly the most satisfied with their senior year educational experience in comparison to seniors in the other programs. School B, featuring a highly diversified and outstanding extra-curricular program, and, including options of its own, elicited greatest satisfaction on a global measure of liking school while the "regular" Rumson-Fair Haven Regional senior program produced the greatest satisfaction in terms of liking the instruction. This latter finding may reflect the outstanding quality of science instruction in Rumson-Fair Haven Regional High School and the necessity for improvement in instruction in alternative program areas.

(6) On a measure of self-assessed growth, pitting self-perceptions of growth in school-related areas to growth in other areas, seniors in the School B program again outdistanced those in the other three programs, perhaps on the same basis as was true for the satisfaction finding. The fact that neither the reliability nor the validity of this measure has been established must be kept in mind.

(7) On a measure of community participation, seniors in the Rumson-Fair Haven Regional alternative program and those in School B topped the field, establishing a link between programs involving alternatives and the movement of education into the community sphere.

D. Conclusions:

The above findings led the evaluators to the conclusions listed below:

(1) The so-called alternative program for seniors at Rumson-Fair Haven Regional High School is truly an alternative program. Seniors have been given more options and more flexibility of choice and avenues of self-directed learning in the program than is true of those not in the program or in other programs.

(2) The alternative program at Rumson-Fair Haven Regional High has been reasonably effective in producing desireable outcomes on both a relative and absolute basis in both traditional and innovative areas. The program has had a clear salutory effect on thinking skills, tolerance of ambiguity, and community participation with some gains evident in self-management and attitudes toward school. No relative losses were evidenced in traditional achievement areas.

(3) The alternative program effect has permeated and influenced student contact groups such as seniors not completely involved in the program, and juniors. Both groups showed the spillover effects of the positive environment in which the alternative program operated, and both groups directly experienced some of the alternative factors such as modular scheduling.

(4) The alternative program presents room for improvement primarily in terms of fuller and more effective implementation of alternatives. All of the alternatives are not clear alternatives; all do not necessarily provide options. Instruction of micro-courses is typically done in a traditional, lockstep fashion; the resource center, more individualized approach to instruction has not been well-implemented. It is, thus, primarily in the area of instruction, that alternatives can be more fully introduced.

E. Recommendations:

Based on the findings and conclusions, the following recommendations are offered.

(1) The alternative program for seniors at Rumson-Fair Haven Regional High School should be continued. The program has been reasonably effective in meeting many of its goals without producing concomitant negative effects of any detectable sort. It must be considered a qualified success in terms of implementation and thought must be given to its improvement and not to its demise.

(2) The program should be strengthened by providing more real instructional alternatives aimed at maximizing student growth and the acquisition of thinking skills. More attention should be paid to the development of alternative modes of instruction and to the improvement of existing ones through the advent of resource centers, individualized procedures, and in-service training in instructional strategies. Such alternatives should incorporate all disciplines and hence increase the reality of interdisciplinary learning experiences.

(3) Seniors at Rumson-Fair Haven Regional High School should be encouraged and assisted in more full involvement in independent study and the utilization of instructional alternatives. To accomplish this, it is probably necessary to expose juniors to some features of the program and to prepare them to engage in meaningful independent study projects and to make intelligent and motivated instructional choices. Some degree of involvement on the part of juniors would probably provide the best form of introduction. For students in the program continued support for and technical assistance in conducting inquiry-oriented projects should be provided throughout the year to facilitate successful independent study activities. The availability of instructional resources needs to be more structured. Independent study "workshops" may be a help in this regard.

(4) An attempt should be made to more fully provide seniors at Rumson-Fair Haven Regional High School with the information and stimuli of metropolitan life. Mainstream ideas and activities in social, political, economic, and aesthetic spheres usually associated with life in areas close to cultural centers should be more readily available in the day-to-day senior program. This, too, is a major source of alternatives and can be a valuable adjunct to instruction and independent study.

EVALUATION REPORT
RUMSON-FAIR HAVEN REGIONAL HIGH SCHOOL
ALTERNATIVE SENIOR PROGRAM

SUMMARY

An evaluation of the Alternative Senior Program at Rumson-Fair Haven Regional High School was conducted by Dr. Bruce W. Tuckman and Thomas Hill, both of Rutgers University, between March and June 1973.

The evaluators found Rumson-Fair Haven Regional to be "an experimental and innovative school which has taken a bold step in its search for alternatives in education."

The evaluation established that the Rumson-Fair Haven Alternative Senior Program is truly innovative and different from conventional programs. The team found that seniors at the school involved in this program significantly exceeded seniors in conventional programs in such areas as critical thinking, tolerance of ambiguity (the degree to which students would reject extreme and closed positions in favor of remaining open-minded in ambiguous situations), tendency towards self study, time management and independently initiated learning as well as involvement in community affairs. They found that these same students attained these characteristics without any loss in traditional achievement areas.

"I am very glad the evaluators have confirmed the philosophy under which we have operated," said Dr. John F. Kinney, superintendent. "We have strongly believed in placing faith in our students to develop self-discipline and responsibility for their own educational growth."

The program, which was designed by 18 students and six members of the faculty during the summer of 1971, has such innovative features as modular scheduling, mini-courses, independent study options, group precepts, flexibility of rules and flexible use of space, including a student lounge. It was funded under an E.S.E.A. Title III federal grant and was directed by Newton Beron, assistant superintendent in charge of curriculum.

Rumson-Fair Haven was compared to two high schools from two affluent New Jersey suburbs which also spend considerable amounts in education. Cost per pupil in the three schools was: $1,415. at Rumson-Fair Haven; $1,435. at Comparison School B and $1,237. at Comparison School C. All three districts are small to medium in size.

The evaluators directly observed the day to day activities and operation of the three schools and conducted their study on the basis of objective tests, observations and interviews. At Schools B and C they were assisted by two Rutgers University undergraduates majoring in elementary school education.

For comparison purposes four groups were identified in the three schools: 1) Rumson-Fair Haven seniors fully involved in the Alternative Senior Program; 2) Rumson-Fair Haven seniors not fully involved in the program; 3) seniors at School B which offers some alternatives in its senior program but not as many as at Rumson-Fair Haven and 4) seniors at School C which offers a highly traditional program both in control and program material.

The team drew at random 50 or 60 students from each group and conducted their test using two standard measures of learning, the STEP test for social studies and the Watson-Glaser Test for Critical Thinking. Social studies was chosen as a sample target area because it was taken by all students and because it reflected the alternate program methodology.

The team concluded that the Rumson-Fair Haven Alternate Senior program is truly an alternative program, that this program has been reasonably effective in achieving its goals and that it has permeated and influenced other student contact groups not directly involved in it.

The evaluators recommend that the program should be continued; it should be strengthened by providing more instructional alternatives; and that seniors should be encouraged and assisted in their involvement with independent study.

In a final observation the evaluators found that the educational philosophy at Rumson-Fair Haven Regional is one which allows seniors the freedom to develop self-discipline and responsibility for their own educational growth. They found that this approach would hopefully culminate in the development of an appreciation of one's natural heritage and a capacity to respond to the demands of a changing society.